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| APPLICATION NO.   | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO.            | CONFIRMATION NO. |
|---|-------------|----------------------|--------------------------------|------------------|
| 10/728,911  | 12/08/2003  | Toshiki Naito        | Q78886                         | 8822             |
| 23373   | 7590        | 08/23/2006           |                                |                  |
| SUGHRUE MION, PLLC<br>2100 PENNSYLVANIA AVENUE, N.W.<br>SUITE 800<br>WASHINGTON, DC 20037 |             |                      | EXAMINER<br>NGUYEN, HUNG THANH |                  |
|   |             |                      | ART UNIT<br>2841               | PAPER NUMBER     |

DATE MAILED: 08/23/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

|                              |                 |              |  |
|------------------------------|-----------------|--------------|--|
| <b>Office Action Summary</b> | Application No. | Applicant(s) |  |
|                              | 10/728,911      | NAITO ET AL. |  |
|                              | Examiner        | Art Unit     |  |
|                              | HUNG T. NGUYEN  | 2841         |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

1) Responsive to communication(s) filed on 19 June 2006.  
 2a) This action is **FINAL**.                            2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

4) Claim(s) 1-16 is/are pending in the application.  
 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 1-16 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on \_\_\_\_\_ is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

|  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
|  | 6) <input type="checkbox"/> Other: _____                                    |

**DETAILED ACTION*****Claim Objections***

Claim 1 is objected to because of the following informalities: "insulating bse layer" should be corrected as "insulating base layer". Appropriate correction is required.

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-8, 10, 12 are rejected under 35 U.S.C. 102(b) as being anticipated by Nakamura (US 6,740,966).

**Regarding claim 1:** Nakamura discloses in figures 1a, a tape carrier for TAB comprising: a carrying support film (1), and individual pieces of flexible wiring boards (10) each of which includes an electrically insulating base layer (see columns 1-17) made of a resin film (see column 2, lines 1-8) and an electric conductor layer made of a metal foil (see column 8, line 55) having a predetermined wiring circuit pattern (see column 7, lines 11-24); wherein said flexible wiring boards (10) are mounted at regular intervals on said carrying support film.

**Regarding claim 2:** Nakamura discloses in figure 1a, a tape carrier for TAB wherein each of said flexible wiring boards (explain in claim 1) is mounted on said carrying support film (explain in claim 1) through an adhesive agent (see column 1, lines 53-61).

**Regarding claim 3:** Nakamura discloses in figures 3a-3f, a tape carrier for TAB wherein opening portions (32) are formed in portions of said carrying support film (explain in claim 1) on which said flexible wiring boards (explain in claim 1) is to be mounted respectively.

**Regarding claim 4:** Nakamura discloses tape carrier for TAB wherein said carrying support film (explain in claim 4) is a polyimide film (see column 7, lines 1-4).

**Regarding claim 6, 7:** Nakamura discloses in figures 1a-2a, a tape carrier wherein a plurality of opening portions (7, 14) are formed in said carrying support film correspondingly to said flexible wiring boards mounted on said carrying support film.

**Regarding claim 8:** Nakamura discloses the flexible wiring boards are arranged on said opening portions though adhesive layers (see column 9, lines 51-67).

**Regarding claim 12:** Nakamura discloses the electrically insulating base layer included polyimide film said electric conductor layer includes a copper foil (see column 8).

***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 9-11, 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nakamura (US 6,740,966).

**Regarding claim 9-11, 13-16:** Nakamura discloses a thickness of said electrically insulating base layer is in a range from 3  $\mu\text{m}$  to 100  $\mu\text{m}$  (see column 14, lines 1-6) except Nakamura does not disclose thickness of said conductor layer is in a range from 3  $\mu\text{m}$  to 50  $\mu\text{m}$ .

However, it would have been obvious to one ordinary skill in the art at the time of the invention was made to have the range of from 3  $\mu\text{m}$  to 50  $\mu\text{m}$ , since it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

***Response to Arguments***

Applicant's arguments filed 5/19/2006 have been fully considered but they are not persuasive.

**Regarding claim 1:** applicant argues that "individual pieces" of flexible wiring board that are mounted on a carrying support film". This argument is not found

to be persuasive because Nakamura discloses in figures 2a, the individual piece of wiring board (11) that mounted on carrying support film (2).

### **Relevant Art**

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The Light et al. (US 6,255,723) teaches the lead layers, Yumoto et al. (US 5,384,204) teaches process of make TAB, Aktyama et al. (US 6,307,269) teaches devices with chip package, Hashimoto (US 6,057,174) teaches step of manufacturing of chip, Otsuka et al. (US 5,975,178) teaches method of making film carrier tape, Gutentag (US 5,960,961) teaches carrier tape with an adhesive, Muramatsu (US 5,177,596).

### **Conclusion**

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUNG T. NGUYEN whose telephone number is 571-272-5983. The examiner can normally be reached on 8:00AM-5:30PM.

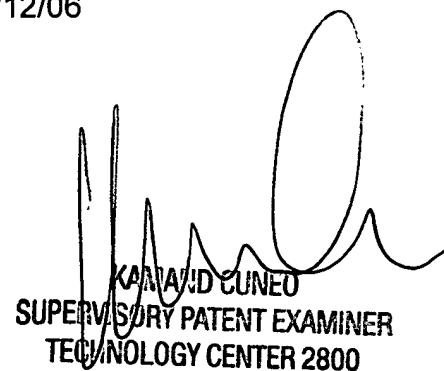
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, KAMMIE CUNEO can be reached on 571-272-1957. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

HUNG NGUYEN

8/12/06

HN



KAMMIE CUNEO  
SUPERVISORY PATENT EXAMINER  
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